

Appendix A

Dr. R.N. Greenshields,  
4, Beaconsfield Court,  
Sketty, Swansea SA2 9JU.

ITEM 3 OF STATUTORY DECLARATION 1975 - 1997 - 22 YEARS

Exhibit RG1 Curriculum Vitae of Work on Hemicellulose Extracts and Gels

1. 0 Research on Gels prior to GB Biotechnology Limited (August 1986):

1.1 The initial work on Gels began with the utilisation of Apple Pomace stemming from an involvement with Aspall Cider Co., Limited, Debenham, Suffolk (1975 - 1984). Dr. R.N. Greenshields and Mr. Michael Greenshields (via their company, Frances Harmon Limited) installed a series of continuous Acetators (UK Patent 1,263,069) to start Aspall Cider into the production of Cider Vinegar from Cider. When the fermenters were operational, additional work was conducted from 1981 on the utilisation of the Apple Pomace residue to the process; this was eventually continued by GB Biotechnology Limited in 1986.

Basically the research involved finding new ways to utilise cider pomace other than for the production of pectin and resulted in the utilisation of the hemicelluloses as gels. Pectin is acid-soluble whereas hemicelluloses are alkali-soluble.

1.2 Work was carried out with Tate and Lyle Limited and the Cypriot Government on the utilisation of Carob beans (*Ceratonia siliqua L.*) to utilise the sucrose in the bean pods and to extract the hemicellulose contents. (1969 until 1975).

NOTE: ALL INFORMATION RELATING TO THE NAMES AND BUSINESS OF OTHER COMPANIES AND ORGANISATIONS IS STRICTLY CONFIDENTIAL

2. 0 Research on Gels by GB Biotechnology Ltd after August 1986 until 1991:

2.1 Palm Oil Residues - the production of gel material from the residues of Palm Oil Milling ex the Malaysian Palm Oil Industry with Bradbury Engineering Services Pte Limited, Singapore. August 1986 until closure of GB Biotechnology Limited, August, 1997.

2.2 Apple Pomace - the utilisation of Apple Pomace for the production of hemicelluloses gels other than pectin with the Taunton Cider Co. Limited, November 1987 et seq until 1995.

2.3 Flocculation Agents in Coal Washing - the utilisation of polymer flocculants (gels and resins) in Coal Washing with Ryan Consolidated Limited/Ryan Industrial Fuels, December 1986 to April 1989.

2.4 Hyaluronic Acid Gels - the production of gel materials for Cosmetics with C-vet, Bury St. Edmunds: Avon Cosmetics Limited, Northampton; Buxted Poultry Limited, Sutton Berger, July to December, 1988.

2.5 Use of Gels for Special Purposes - Dr. Brooke Jenkins, Department of Chemistry, University of Warwick, British Aerospace, M. O. D. Confidential M. O. D. Contract November 1989 to April 1990.

2.6 Sugar Beet - the utilisation of Sugar Beet Pomace, residues of the Beet Sugar Industry with the British Sugar Corporation, Kidderminster, August 1986 to 1989, then GB Gels 1992 - 1995.

During this period our researches revealed a French Patent by F. M. Rombouts, J. Thiabault and C. Mercier 2545101, 29th April, 1983 and the following papers. Markwalder, H. U. Neukom, H. (1976) Diferulic Acid as a possible crosslink in hemicelluloses from wheat germ Phytochemistry 15: pp 836 - 837.

Geissmann, T., Neukom, H. (1971) Vernetzung von phenolcarbonsaure-estern von polysaccharides durch oxydative phenolische kupplung Helv. Chim Acta 54: pp 1108 - 1112. (on sugar beet pectins).

This led us to develop a process for the production of gels from plant materials, particularly cereals. The work was done on the following substrates:- Apple pomace; Plums; Wheat bran - (Smiths, Jordans, Welsh Allied), Soya bran; Rice bran; Oat bran; Millet; Corn bran - (Kelloggs, Smith, CPC) Barley bran; Barley dust; Malt dust; Malt culms.

A patent application was taken out in November 1991 by GB Biotechnology Limited, Greenshields, R.N and Rees A.L Gel Production from Plant Matter for a process and its products.

This patent application was pursued to a successful full UK patent and patents in other countries EC. Portugal, South Africa USA, Japan etc.

3. 0 Research work by GB Biotechnology Limited until the formation of GB Gels Limited 1991 - 1992:

This period was devoted to laboratory research confirming the phenomenon; identifying its conditions; producing purified samples (10g); determining its origins; obtaining and optimising raw materials; assaying its potential properties and uses and surveying the market. Over 200 companies were identified and expressed interest in our work. From marketing, we were approached by Graham Collyer, then Research Manager, Seton Healthcare PLC who immediately took a license on the process for wound dressing followed by a license of the patent. Patents were consolidated and intellectual rights established.

4. 0 Initial Research and Development Work upon the formation of GB Gels Limited (28.1.92). 1992 - 1993 Research work with Seton Healthcare PLC:

GB Gels was formed and licensed by GB Biotechnology Limited to research and develop the Gel (SuperGel/AXF - arabinoxylan ferulate) to commercial reality. An optimised process was scaled up to 10g -> 100g -> 500g ->. On this basis and with the help of Seton Healthcare Limited, a small laboratory pilot plant was built with a potential of 500g production. This system was used to produce samples for initial testing of the gel as a wound dressing but also used to refine a process for pilot-scale production both in biochemical and physical terms. Various equipment was also tested for the process scheme in readiness for further scale-up.

5. 0 Pilot Plant and Development Work by GB Gels Limited 1993 - 1995 with Seton Healthcare PLC:

During the early part of this period, efforts were concentrated on building the pilot-plant, (Kg production) obtaining and installing the appropriate equipment followed by testing and quality assurance. Raw materials were assessed and purchased in bulk followed by trials in the laboratory and laboratory pilot plant. There were changes in staff. Retraining and initiation were essential. A new quality control laboratory was built and staffed. Considerable extension of the premises also undertaken with renovation and preparation for large-scale storage and operation.

In September 1994, the first batches were combined to give amounts ranging from 500g to 2.5 Kg and supplied to Seton Healthcare (19.12.94) for trials, testing and development of the wound gel (Sterigel).

6. 0 Pilot Plant Production with Seton Healthcare PLC:

The pilot plant was designed to produce 1.5 Kg batches from approximately 150 Kg of bran. The operation of the pilot plant allowed 2 x 3 batches per week (usually Monday and Wednesday) i.e. 6 x 1.5 Kg = 9 Kg per week of AXF in a final run. After testing of each batch (which initially was kept discrete and separate) this was despatched to Seton Healthcare in the week following production as 6 bags in 2 drums.

Two contracts were given to GB Gels in this period - 20.9.95 to 29.7.96 163Kg which included a full validation run of six batches (20.8.96) of 1.5 KG and a second order for 300 KG over the period January 1997 to July 1997. In July 1997 the Pilot Plant was closed.

7. 0 Research and Development with Dalgety PLC 1996 - 1997:

Contact with Dalgety PLC Research suggested that GB Gels Limited examine Wheat Bran in more detail for AXF and like materials. An initial six months research contract showed a positive situation and a second six months research contract confirmed this with a satisfactory process being developed. Negotiations were then undertaken by Dalgety PLC to purchase the patents UK, US, Japan, S. Africa, European etc., (with the exception of the Seton Licence). A third one year contract was then undertaken to determine the potential and properties of this new AXF together with the other by-products, residues and other raw materials.

8. 0 Other Research and Development Contracts:

During the period 1986 to 1991 Research and Development Contracts were pursued with Beecham then Smithkline Beecham via Bovril-Marmite on the products of Coenzymes from yeast. In 1991 CPC Int. Inc. bought Bovril-Marmite and gradually R & D contracts were obtained to examine initially, Yeast cell wall residues for Food Gels then Corn residues from their processing in the USA including Corn Bran type residues. These contracts ceased in 1995 when CPC Int. Inc. reorganised and removed their R & D departments. An occasional contract was obtained from Corn Products PLC on Corn Bran residues. Various other minor contracts over the period 1986 to 1997 were also pursued with Novo Nordisk a Norwegian Fish Oil Company etc.

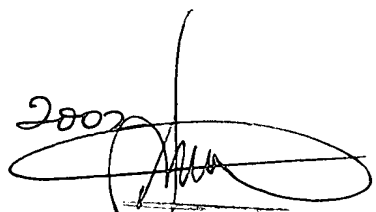
In 1997 Dr. R.N. Greenshields retired due to ill-health and GB Biotechnology Limited and GB Gels Limited was closed. The license with Seton was transferred to GB R & D, C Limited which is retained as a consultancy/publishing vehicle with Dr. Greenshields as a consultant.



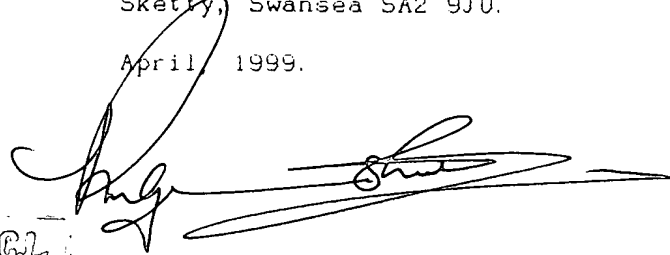
Dr. R.N. Greenshields  
Consultant  
GB R & D, C Limited,  
4 Beaconsfield Court,  
Sketty, Swansea SA2 9JU.

April, 1999.

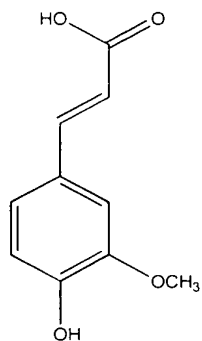
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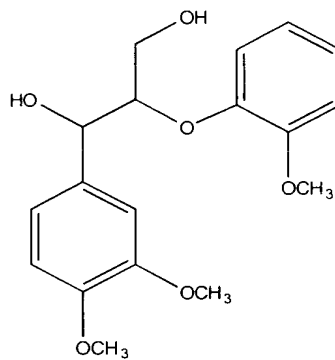
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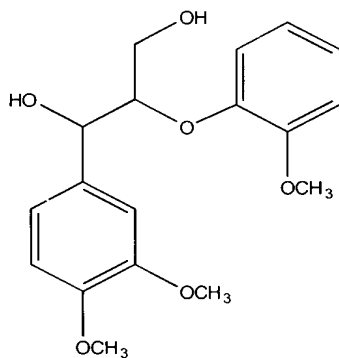
## Appendix B



**Fig. 1** Ferulic acid



**Fig. 2** A dimer of ferulic acid



**Fig. 3** Compound I – A typical lignin compound